RESULTS OF THE DELPHI IX SURVEY OF OIL PRICE FORECASTS

CALIFORNIA ENERGY COMMISSION

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CONTENTS

Page

PURPOSE 1

BACKGROUND 1

PANEL DESCRIPTION 2

SURVEY DESCRIPTION 2

SURVEY RESULTS 2

- Crude Oil Prices 2
- Previous Delphi Forecasts 3
- Rates of Change 5
- Factors Affecting Price 5

Figure 1: Delphi IX Oil Price Forecast - Panel Mean 7

Figure 2: Delphi IX Oil Price Forecast - Panel Mean +/- Standard Deviation 8

Figure 3: Delphi IX Oil Price Forecast - Panel Median 9

Table 1: Comparison of Historical Oil Prices and Delphi Forecasts 10

Figure 4: Comparison of Historical Oil Prices and Delphi Forecasts (Graph) 11

Figure 5: Delphi IX Oil Price Forecast - Panel Mean Rates of Change 12

Table 2: Contributing Factors to a High Oil Price Case 13

Table 3: Contributing Factors to a Low Oil Price Case 14

Appendix A 15

PURPOSE

This report presents the results of the California Energy Commission (Commission) staff's **1997 Delphi IX Oil Price Survey**. Following is a brief background of the Delphi survey method, a description of the Delphi IX panel and Survey, and a summary of the Delphi IX Survey results.

BACKGROUND

Since 1983, the Commission has conducted surveys of oil price forecasters using the Delphi technique as one of its forecasting tools. Prior to 1983, the Commission staff compiled and analyzed various crude oil price forecasts in the literature and selected a representative forecast to use as the official Commission forecast.

In the Delphi survey process currently used by Commission staff, an international panel of experts from financial, academic, industry, consulting, and government institutions is selected. Each panelist's opinions regarding future changes in oil prices and related economic variables is systematically polled through a series of questionnaires. The results of the initial survey round are compiled, and a summary of the results, including the averages of the entire panel's responses, is returned to the panelists, who are then given an opportunity to change their responses. The final results are then used as the basis for the Delphi oil price forecast.

The Delphi survey method is preferred because it incorporates a number of features that make it particularly attractive to the Commission's needs. Specifically:

- The forecast survey responses can be precisely tailored to the Commission's 20-year policy analysis period. Forecasts developed by other institutions generally address shorter or disparate periods.

- The flexibility of the survey method allows it to be shaped to address oil price issues important to the Commission.

- The survey methodology imposes a common response format on panelists. This permits consistent, systematic statistical treatment of survey responses to arrive at a representative result.

- The survey makes it possible to consult with, and incorporate the views of, a relatively large number of geographically dispersed experts.

- The expertise possessed by panelists tends to ensure that each viewpoint is based on a knowledgeable assessment of market fundamentals.

- The broad institutional representation among panelists provides a wide range of viewpoints.

- The anonymity guaranteed to survey panelists encourages candor.

PANEL DESCRIPTION

Panel selection involves a two-part process. First, a list of prominent national and international educational and financial institutions, oil companies, consulting firms and governmental agencies is prepared (including the names of respondents to prior Delphi surveys). Second, individuals responsible for preparing and evaluating oil price forecasts in these institutions are invited to participate in the survey panel.

In order to encourage candor, participation is solicited with the understanding that panelist identities and individual responses will not be disclosed. The Delphi IX panel consists of 22 experts, including five from state, federal and foreign government; two from academia; seven from consulting and/or research; six from industry and two from financial institutions. Four panelists are from outside of the U.S..

SURVEY DESCRIPTION

The crude oil forecast represents the average price of internationally traded crude oil, rather than a premium oil (such as West Texas Intermediate). Using this method, the panel was asked to provide three oil price forecasts: Low, Most Likely and High, for the time period of 1997 through 2018. In addition, the panel was asked to consider and rank various factors that could affect the price of oil in the High and Low forecasts.

For purposes of this survey, the definitions of Low, Most Likely and High forecasts are:

- **Low price forecast:** 90 percent of all possible oil price paths would lie above the estimated low price path.
- **Most Likely price forecast:** the expected annual average price of internationally traded crude oil.
- **High price forecast:** 90 percent of all possible oil price paths would lie below the estimated high price path.

A copy of the **1997 Delphi IX Oil Price Survey** is presented in Appendix A, beginning on page 15.

SURVEY RESULTS

Crude Oil Prices (Figures 1, 2 and 3)

Figure 1 (page 7) shows the mean of the Low, Most Likely and High price paths. The price forecasts have been adjusted to remove the effect of inflation by using constant dollars.

As the graph in Figure 1 illustrates, the Most Likely oil price forecast begins with $19.77 per barrel for 1997 and rises to $24.07 by 2018. The Low oil price forecasts is initially $16.92 for 1997 and decreases to $16.68 by 2018. The High oil price forecast starts at $22.95 in 1997 and climbs to $39.69 by 2018.

Figure 2 (page 8) illustrates the Most Likely mean forecast as well as the lines indicating the range of the standard deviation. This graph illustrates the disparity among each of the mean values, with the bandwidth increasing somewhat over time.

Figure 3 (page 9) shows the median of the oil price forecasts. These are lower than the mean forecasts and encompass a narrower range. This to be expected, since the median is not strongly influenced by extremely high or low forecasts and therefore more closely represents the majority of the panelists' forecasts. The Most Likely median forecast begins with $19.64 and goes to $22.36 per barrel by 2018. The Low median forecast begins with $16.50 and ends at $15.26 per barrel. The High median forecast shows the highest slope, rising from $22.50 in 1997 to $34.09 in 2018.

Previous Delphi Forecasts (Table 1 and Figure 4)

Since the first Delphi survey conducted by the Commission, the oil price forecasts have shared a trait of having upward trends, with the Delphi I forecast having the steepest upward slope. The Delphi surveys appear to be influenced most by recent crude oil prices, especially when these seem to be driven by external factors such as geopolitical events, which are not easily absorbed by market forces in the short term. Table 1 (page 10) and Figure 4 (page 11) illustrate the historic and Delphi forecasted oil prices, comparing them using adjusted, 1997 constant dollars.

The Delphi I price forecast (1982-83) shows prices escalating up to $101 per barrel by the end of the forecast period. This forecast was done on the heels of the second oil market disruption, at a time when OPEC dominance of the marketplace was at its peak, with crude oil prices averaging $54 (in 97 dollars). Delphi I panelists felt that, in light of the recent fall of the Shah of Iran, it was impossible to predict the future stability and political course of Persian Gulf nations, and that long term security of supply was one of the most serious factors affecting price. The panelists were concerned that sudden and severe international oil supply crises were likely to occur in the near future.

The Delphi II (1985) price forecast reflected the continuing downward price trend of crude oil. (Prices had dropped by almost 30% since the Delphi I forecast.) The Delphi II forecast also appears to reflect the more optimistic climate of increased non-OPEC oil production, spurred by higher prices and the impacts of deregulation of the oil industry, which allowed the market to adjust smoothly as needed. Many of the Delphi II panelists felt that the current situation of world oil over-supply would last for a number of years, causing prices to erode. The panelists predicted that, toward the end of the decade, the combination of increasing demand and decreasing production, both spurred by falling prices, would cut heavily into surplus production capacity.

This would at first result in only modest price increases, but the increases would get larger toward the latter half of the nineties.

Delphi III, conducted in July of 1986, reflects the Saudi influence on Middle Eastern oil production, which caused oil prices to collapse. The Saudis had moved to a market share approach to oil production. Oil prices had dipped below $10 a barrel, OPEC had just adjourned without an agreement, and Delphi III panelists were very uncertain about near-term forecasts. Panelists predicted that oil prices would rebound from their current low levels by 1990 and would then increase at a moderate rate, before growing at a more rapid rate toward the end of the forecast period. The primary reason given for declining oil prices and ample supplies was the response of oil consumers and suppliers to recent high oil prices, which had encouraged exploration and discouraged energy use through improved efficiency and increasing substitution of other energy sources for oil. The panelists felt that future prices would be responsive to demand and supply conditions spawned by the low prices, pointing to trends of increased consumption and declining expenditures for exploration and development. These trends would eventually cause demand to increase toward the limit of world oil production capacity which, in turn, would lead to increasing oil prices in the 1990s.

The Delphi IV forecast (1987) was higher than the Delphi III forecast, as prices had begun to move up in response to OPEC's latest round of production cuts and price agreements. OPEC appeared to be more of a force in world oil markets and prices were beginning to firm. The panelists agreed that OPEC's actions would be the major factor in determining the future path of oil prices, with most deviations caused by adherence, or lack thereof, to OPEC's strict production quotas.

The Delphi V forecast (1988) took place during a period of uncertainty caused by the Iran-Iraq tanker war and the threatened closure of the Strait of Hormuz. OPEC production quotas were still cited by the panelists as the primary factor driving oil prices, with other factors including oil demand in industrialized and developing countries and the cost of development of resources. Since prices were again low, the Delphi V forecast was slightly flatter than previous forecasts.

The Delphi VI forecast (1991), which took place following the Persian Gulf War, continued the downward trend of the last few surveys, reflecting a confidence in the resilience of the oil market, despite the recent conflict. As with the prior two Delphi surveys, the OPEC production quota system was cited as the primary factor affecting the panelists' forecasts.

Delphi VII and VIII (1993, 1995) continued the trend of flatter forecast trajectories, with oil prices predicted to increase very minimally over the 20 year forecast period. The panelists cited a larger reserve base, revisions to total

recoverable resources continuing upward, and the global market continuing to become more integrated and efficient. Potential disruptions, as evidenced by the Persian Gulf War, were not seen to cause long-term price increases. While demand was increasing, exploration and development were also on the rise, and confidence in stable oil prices is reflected in the Delphi VII and VIII oil price forecasts.

Rates of Change (Figure 5)

The rates of change variations in the **1997 Delphi IX Oil Price Survey** were the greatest in the High price forecast, as seen in Figure 5 (page 12). The pattern of the Most Likely price forecast also fluctuated, while the Low price forecast was the most consistent among the panelists. With all three forecasts, the curves leveled off substantially after 2003.

Factors Affecting Price (Tables 2 and 3)

The panel was asked to consider the following factors in their high and low forecasts:

- Collapse of or adherence to OPEC production quotas
- Impact of military conflict and political instability in the Middle East and the former Soviet Union
- Size of worldwide oil resources
- Impact of either additional or relaxed environmental restrictions on development of known oil resources
- Subsidies for oil exploration and development in the U.S. and in developing countries
- Higher or lower oil demand in industrialized and developing countries
- Political restrictions on crude oil production in non-OPEC countries
- Success or failure of actions to encourage conservation
- Iraq resuming production for the world oil market
- Success of failure of new field development or expanded production of existing fields
- Impact of decreasing Alaskan oil production capability and increasing foreign imports into the lower 48 states
- Increasing worldwide privatization of oil field development and production

Panelists' estimates of the importance of these factors for the Delphi IX forecast are compared to factors from the Delphi VII and VIII forecasts in Tables 2 and 3 (pages 13 and 14).

According to the respondents, the most important factors driving the high price

case will be continuing military conflict and/or political instability in the Middle East, greater oil demand from developing countries, and long term adherence by OPEC countries to production quotas. If demand grows faster than production capacity, oil supply markets will tighten, driving up prices worldwide.

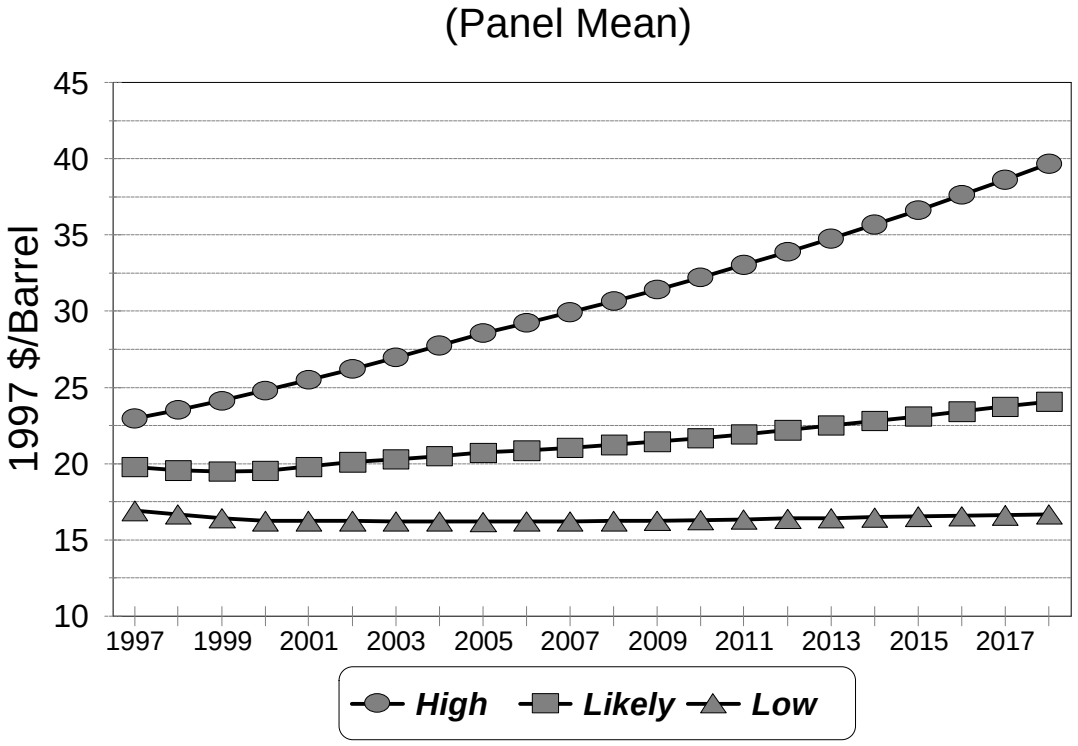
Other key factors in this forecast for higher oil prices are:

- The impact of political instability on the production and export of oil from the former Soviet Union
- Additional environmental restrictions on development of known oil resources
- Greater than expected oil demand in industrialized countries
- Continuing constriction on Iraq by the United Nations

The low price forecast shows a gradual decline of the price of oil over the next 20 years. Panelists attributed this declining forecast primarily to the possible permanent or long term collapse of the OPEC production quota system and to the resumption by Iraq of production for the world oil market, along with a rapid rise in exports from the countries of the former Soviet Union. This increase in supply combined with lower demand in both developing and industrialized countries, larger than estimated worldwide oil resources, and the development and use of advanced technologies in finding new fields or expanding production from existing fields could result in lower oil prices.

Figure 1

Delphi IX Oil Price Forecast



YEAR	High ($)	Most Likely ($)	Low ($)
1997	22.95	19.77	16.92
1998	23.53	19.57	16.66
1999	24.12	19.49	16.43
2000	24.81	19.53	16.24
2001	25.50	19.82	16.23
2002	26.20	20.10	16.23
2003	26.95	20.29	16.22
2004	27.73	20.50	16.20
2005	28.55	20.72	16.19
2006	29.24	20.86	16.20
2007	29.93	21.05	16.22
2008	30.66	21.24	16.24
2009	31.42	21.45	16.27
2010	32.22	21.67	16.30
2011	33.04	21.94	16.35
2012	33.89	22.21	16.39
2013	34.78	22.49	16.43
2014	35.69	22.79	16.48
2015	36.64	23.10	16.53
2016	37.62	23.41	16.58
2017	38.64	23.74	16.63
2018	39.69	24.07	16.68

Delphi IX Oil Price Forecast

(Panel Mean +/- Standard Deviation)

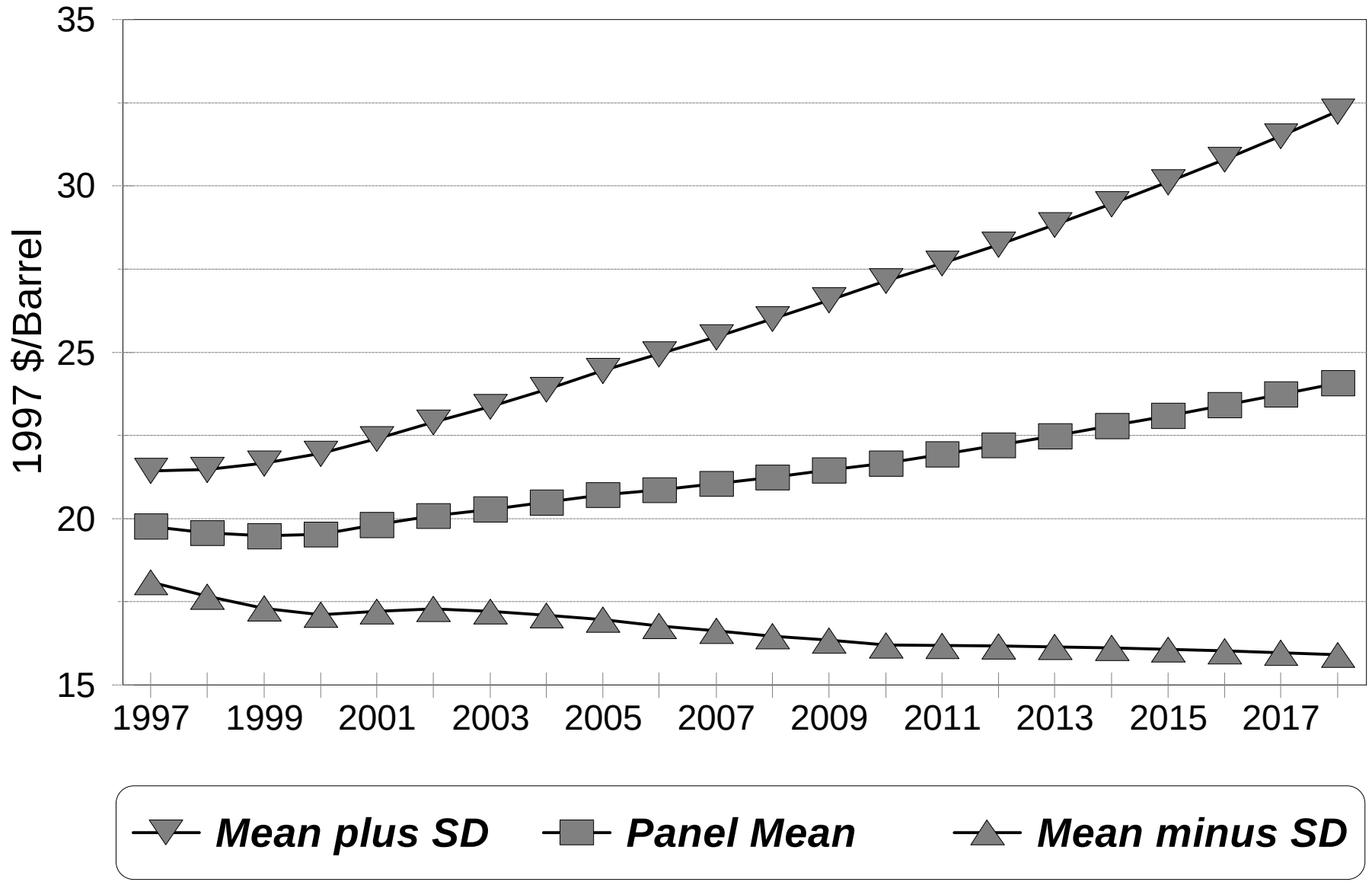
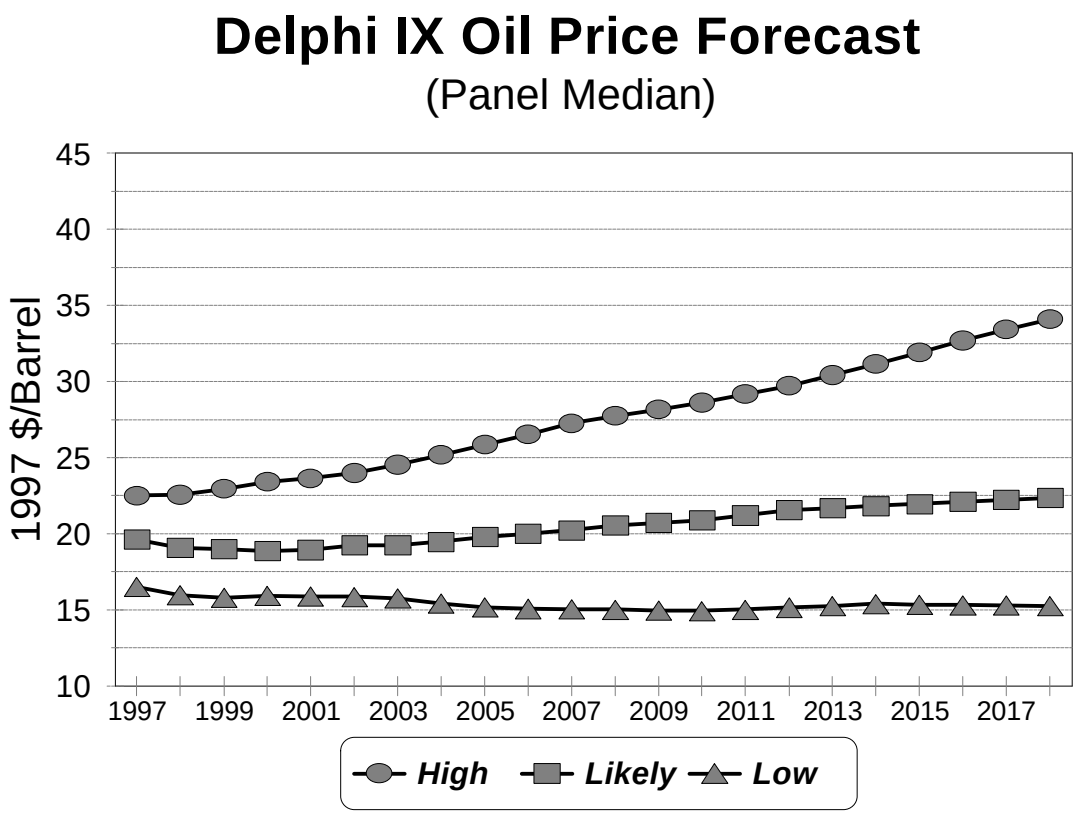


Figure 3



YEAR	High ($)	Most Likely ($)	Low ($)
1997	22.50	19.64	16.50
1998	22.57	19.07	15.98
1999	22.97	19.00	15.80
2000	23.42	18.88	15.93
2001	23.63	18.93	15.90
2002	23.99	19.27	15.86
2003	24.54	19.26	15.75
2004	25.19	19.49	15.43
2005	25.85	19.80	15.18
2006	26.54	20.01	15.09
2007	27.24	20.24	15.05
2008	27.76	20.55	15.01
2009	28.18	20.72	14.97
2010	28.62	20.90	14.93
2011	29.16	21.22	15.03
2012	29.72	21.57	15.15
2013	30.42	21.70	15.27
2014	31.15	21.83	15.39
2015	31.90	21.96	15.36
2016	32.68	22.09	15.32
2017	33.42	22.22	15.29
2018	34.09	22.36	15.26

Table 1
Comparison of Historical Oil Prices and Delphi Forecasts

$1997 Oil Prices (Delphi IX)

Year	Historical	Delphi I	Delphi II	Delphi III	Delphi IV	Delphi V	Delphi VI	Delphi VII	Delphi VIII	Delphi IX
1972	10.81									
1973	12.96									
1974	36.51									
1975	37.16									
1976	34.18									
1977	34.82									
1978	32.51									
1979	44.55									
1980	63.85									
1981	63.65									
1982	54.37	54.97								
1983	45.69	55.52								
1984	43.25	56.09								
1985	39.37	56.64	41.50							
1986	19.89	57.20	40.50	22.35						
1987	24.94	57.78	39.53	22.71	24.20					
1988	19.74	59.53	38.96	23.13	24.58	19.23				
1989	22.84	61.31	38.40	23.84	24.93	19.37				
1990	25.59	63.14	37.85	24.71	25.56	19.47				
1991	20.52	65.04	38.52	25.64	26.57	20.12	21.71			
1992	20.15	67.00	39.22	26.59	27.68	20.72	22.05			
1993	17.43	69.00	39.93	27.62	28.87	21.50	22.56	20.44		
1994	16.18	71.08	40.64	28.61	30.01	22.26	23.09	20.51		
1995	17.53	74.26	41.37	29.31	31.30	23.62	23.63	20.59	17.53	
1996	20.54	77.61	42.38	30.69	32.41	25.18	24.32	20.85	17.73	
1997		81.11	43.44	31.86	33.80	25.71	25.06	21.14	18.02	19.77
1998		84.74	44.54	33.07	35.25	26.31	25.82	21.59	18.29	19.57
1999		88.56	45.65	34.36	36.83	27.29	26.66	22.08	18.60	19.49
2000		92.55	46.81	35.59	38.50	28.39	27.55	22.58	18.84	19.53
2001		96.71	47.97	36.85	40.04	29.19	28.27	23.01	19.10	19.82
2002		101.07	49.17	38.18	41.64	30.10	28.99	23.47	19.36	20.10
2003			50.39	39.55	43.33	31.05	29.76	23.89	19.59	20.29
2004			51.65	40.98	45.11	32.01	30.56	24.38	19.79	20.50
2005			52.95	42.51	46.97	32.99	31.38	24.86	19.99	20.72
2006				44.06	48.94	33.96	32.04	25.32	20.19	20.86
2007					51.01	34.97	32.72	25.79	20.40	21.05
2008						35.98	33.42	26.28	20.60	21.24
2009						37.06	34.14	26.80	20.79	21.45
2010							34.90	27.33	20.94	21.67
2011							35.68	27.84	21.09	21.94
2012							36.47	28.35	21.25	22.21
2013								28.89	21.40	22.49
2014								29.44	21.57	22.79
2015									21.72	23.10
2016									21.89	23.41
2017										23.74
2018										24.07

Comparison of Historical Oil Prices and Delphi Forecasts

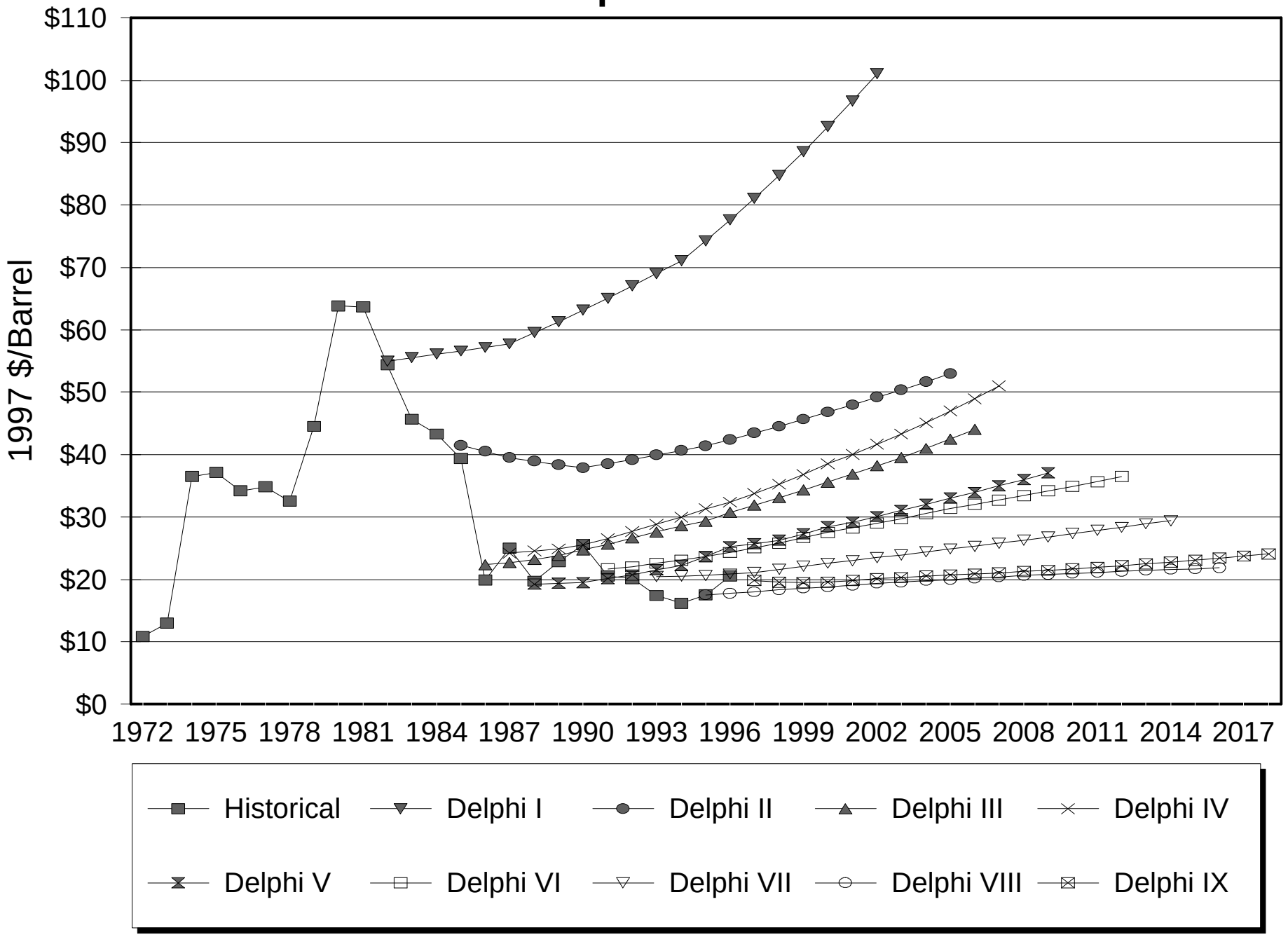
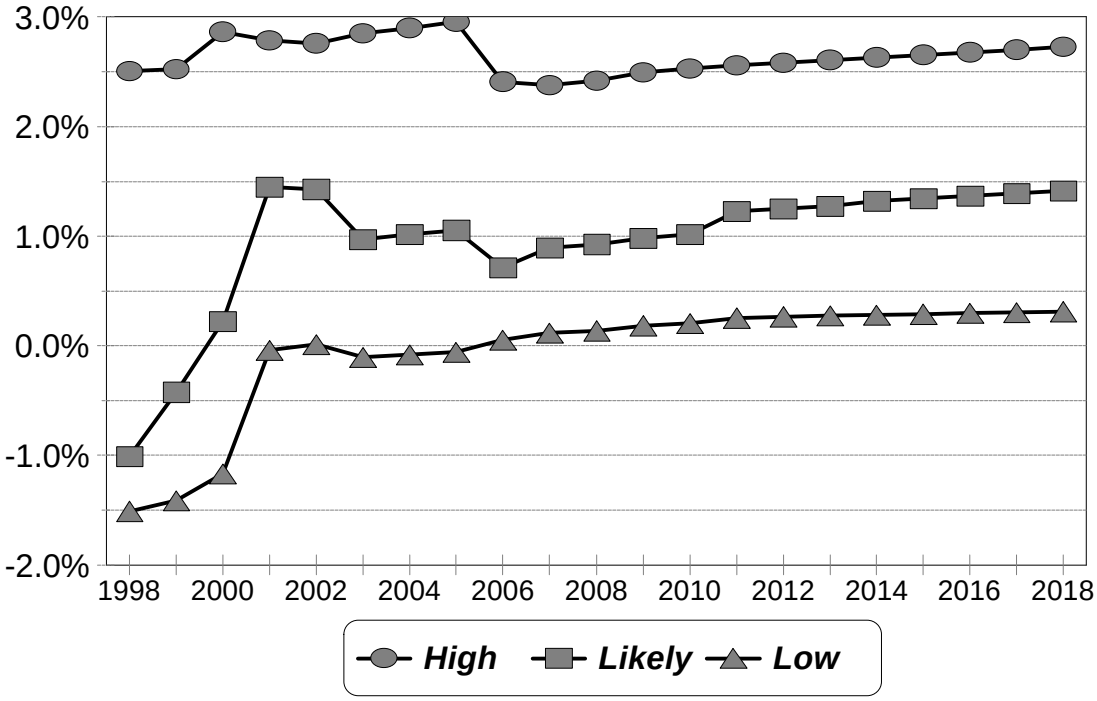


Figure 5

Delphi IX Oil Price Forecast

(Panel Mean Rates of Change)



YEAR	High ($)	Most Likely ($)	Low ($)
1998	2.51%	-1.01%	-1.51%
1999	2.52%	-0.42%	-1.41%
2000	2.86%	0.22%	-1.17%
2001	2.79%	1.45%	-0.04%
2002	2.76%	1.43%	0.01%
2003	2.85%	0.97%	-0.10%
2004	2.90%	1.01%	-0.08%
2005	2.95%	1.06%	-0.06%
2006	2.41%	0.71%	0.05%
2007	2.38%	0.89%	0.12%
2008	2.42%	0.93%	0.14%
2009	2.49%	0.98%	0.18%
2010	2.53%	1.01%	0.20%
2011	2.56%	1.23%	0.25%
2012	2.58%	1.25%	0.26%
2013	2.61%	1.27%	0.27%
2014	2.63%	1.32%	0.28%
2015	2.65%	1.34%	0.29%
2016	2.68%	1.37%	0.30%
2017	2.70%	1.39%	0.30%
2018	2.73%	1.41%	0.31%

TABLE 2

CONTRIBUTING FACTORS TO A HIGH OIL PRICE CASE (AVERAGE)

FACTORS	CONTRIBUTION (%)		
	DELPHI VII	DELPHI VIII	DELPHI IX
Long term adherence by OPEC countries to strict production quotas	30	18	17
Continuing military conflict and/or political instability in the Middle East	9	18	18
Continuing military conflict and/or political instability in the former Soviet Union	--	12	9
Political restrictions on crude oil production in non-OPEC oil exporting countries	14	3	4
Additional environmental restrictions on development of known oil resources	4	3	7
Greater than expected oil demand in industrialized countries	5	12	7
Greater than expected oil demand in developing countries	16	21	18
Limited opportunities for further conservation	6	2	3
Continuing constrictions on Iraq by the United Nations	--	--	7
New field production failures or increasing exploration and development costs	--	--	6
Impact of decreasing Alaskan oil production capability and increasing imports into the lower 48 states	--	--	3
Limited discoveries of major new non-OPEC oil fields	6	--	--
Limited development of substitutes for oil	9	4	--
Other contributing factors. (Suggestions for Delphi IX high oil price case include: The persistence of structural backwardation in the futures markets, political turmoil in Venezuela and Mexico, and the failure of OPEC to invest early enough in new production capacity.)	1	7	1
Total	**100**	**100**	**100**

TABLE 3

CONTRIBUTING FACTORS TO A LOW OIL PRICE CASE (AVERAGE)

FACTORS	CONTRIBUTION (%)		
	DELPHI VII	DELPHI VIII	DELPHI IX
Permanent or long-term collapse of the OPEC production quota system	27	24	18
Relaxation of U.S. environmental restrictions on development of known oil resources	13	3	3
Rapid rise in exports from the countries of the former Soviet Union	--	--	10
Subsidies for U.S. oil exploration and development	12	1	2
Subsidies in developing countries for oil exploration and development	13	5	3
Worldwide oil resources proving to be larger than now estimated	5	11	11
Lower oil demand in industrialized countries	3	13	10
Lower oil demand in developing countries	6	18	9
Successful government policies and/or private actions to induce conservation	15	7	6
Iraq resuming production for the world oil market	--	--	12
Development and use of advanced technologies in finding new fields or expanded production from existing fields	--	--	10
Increasing worldwide privatization of oil field development	--	--	5
Continuing military conflict and/or political instability in the former Soviet Union and the resulting impact on the production and export of oil and gas from this area	--	4	--
The new political climate in Washington, D.C.	--	2	--
The recent economic and political changes in Mexico	--	1	--
The impact of GATT on world oil trade	--	1	--
Other contributing factors. (The one suggested for Delphi IX low oil price case is: The increased role for natural gas in non-transport sectors, especially in developing economies.)	6	10	1
Total	**100**	**100**	**100**

APPENDIX A

California Energy Commission
Delphi IX Panel Survey
November 1996

Instructions

This survey is made up of three sections:

1. The first section asks for your estimate of the most likely path that oil prices may follow over the next 20 years.

2. The second section asks for your estimate of the 1997 price and a high price path. An accompanying question asks that you select and estimate the importance of various contributing factors that might cause such a high price path.

3. The third section asks for your estimate of a low price path. As with the high estimate, an accompanying question asks that you select and estimate the importance of various contributing factors that might cause such a low price path.

In this cycle we are also asking, for statistical purposes, that you fill in your organization's "type" (financial, academic, consulting, producer/refiner, federal or state government, etc.) on the top of page 3.

Note that the index for crude oil prices in this survey is the average annual price of all internationally traded crude oils (as per the U.S. Energy Information Administration's Weekly Petroleum Status Report, rather than a specific Brent, WTI, Saudi Light or some other premium oil index). We have included a draft of the GDP implicit price deflator series (adjusted from Delphi VIII's series), on the last page of the survey, for your use in calculating the real rates of oil price change over the forecast horizon.

Name_____

Organization_____

Type_____

Date_____

I. Most Likely Case

Question 1. What is your estimate of the most likely 1997 average price of internationally traded crude oil (in 1997 dollars)?

$_____/bbl

Question 2. For the period 1997 through 2018, please enter estimates of the most likely average annual real rates of oil price change. Use as many time intervals, of whatever length, as you require.

1997 - _____: _____percent/year

_____ - _____: _____percent/year

_____ - _____: _____percent/year

_____ - 2018: _____percent/year

Question 3. Estimate the probability (0-100%) that your price forecast for periods beyond 1997 will be generally correct.

_____percent

II. High Oil Price Path

Question 4. Please enter an estimate of the 1997 price and the average annual real rates of oil price change (for the period 1997 - 2018) such that 90 percent of all possible price paths would lie below this path. Use as many intervals, of whatever length, as you require.

1997 = $_____/bbl

1997 - _____: _____percent/year

_____ - _____: _____percent/year

_____ - _____: _____percent/year

_____ - 2018: _____percent/year

Question 5. Estimate, as a percentage, the extent to which each of the following factors might contribute to price levels of this high price path.

a. Long term adherence by OPEC countries to production quotas: _____%

b. Continuing military conflict and/or political instability in the Middle East: _____%

c. Continuing military conflict and/or political instability in the former Soviet Union: _____%

d. Political restrictions on crude oil production in non-OPEC oil exporting countries: _____%

e. Additional environmental restrictions on development of known oil resources: _____%

f. Greater than expected oil demand in industrialized countries: _____%

g. Greater than expected oil demand in developing countries: _____%

h. Limited opportunities for further conservation: _____%

i. Continuing constrictions on Iraq by the United Nations: _____%

j. New field production failures or increasing exploration and development costs: _____%

k. Impact of decreasing Alaskan oil production capability and increasing imports into the lower 48 states: _____%

l. Other contributing factors: _____

_____

_____ _____%

[Total=100%]

III. Low Oil Price Path

Question 6. Please enter an estimate of the 1997 price and the average annual real rates of oil price change (for the period 1997 - 2018) such that 90 percent of all possible price paths would lie above this path. Use as many intervals, of whatever length, as you require.

1997 = $_____/bbl

1997 - 19_____: _____percent/year

19____ - _____: _____percent/year

_____ - _____: _____percent/year

_____ - 2018: _____percent/year

Question 7. Estimate, as a percentage, the extent to which each of the following factors might contribute to price levels of this low price path.

a. Permanent or long-term collapse of the OPEC production quota system: _____%

b. Relaxation of environmental restrictions on development of known oil resources: _____%

c. Rapid rise in exports from the countries of the former Soviet Union: _____%

d. Subsidies for U.S. oil exploration and development: _____%

e. Subsidies in developing countries for oil exploration and development: _____%

f. Worldwide oil resources proving to be larger than currently estimated: _____%

g. Lower than expected oil demand in industrialized countries: _____%

h. Lower than expected oil demand in developing countries: _____%

i. Successful government policies and/or private actions to induce conservation: _____%

j. Iraq resuming production for the world oil market: _____%

k. Development and use of advanced technologies in finding new fields or expanded production from existing fields: _____%

l. Increasing worldwide privatization of oil field development and production: _____%

m. Other contributing factors: _____

_____

_____ _____%

[Total=100%]

Please note any additional comments about your responses, and any suggestions or observations you may have concerning the questionnaire in the space below, or on an attached sheet:

_____
_____
_____
_____
_____
_____
_____

GDP IMPLICIT PRICE DEFLATOR (1996 = 100)*

YEAR	INDEX	PERCENT CHANGE
1970	26.58	
1971	28.05	5.5%
1972	29.36	4.7%
1973	31.21	6.3%
1974	33.94	8.8%
1975	37.20	9.6%
1976	39.53	6.3%
1977	42.23	6.8%
1978	45.56	7.9%
1979	49.54	8.7%
1980	54.20	9.4%
1981	59.60	10.0%
1982	63.31	6.2%
1983	65.88	4.1%
1984	68.82	4.5%
1985	71.32	3.6%
1986	73.25	2.7%
1987	75.58	3.2%
1988	78.49	3.9%
1989	82.03	4.5%
1990	85.59	4.3%
1991	88.89	3.9%
1992	91.38	2.8%
1993	93.37	2.2%
1994	95.34	2.1%
1995	97.60	2.4%
1996	100.00	2.5%
1997	102.53	2.5%
1998	105.53	2.9%
1999	108.70	3.0%
2000	112.05	3.1%
2001	115.72	3.3%
2002	119.68	3.4%
2003	123.79	3.4%
2004	128.00	3.4%
2005	132.25	3.3%
2006	136.76	3.4%
2007	141.43	3.4%
2008	146.26	3.4%
2009	151.25	3.4%
2010	156.50	3.5%
2011	161.95	3.5%
2012	167.49	3.4%
2013	173.20	3.4%
2014	179.12	3.4%
2015	185.21	3.4%
2016	191.51	3.4%
2017	198.02	3.4%
2018	204.75	3.4%

SOURCES: 1970-1985 Economic Report of the President, 2/94; 1986-93 Council of Economic Advisers, 4/94;1994-2016 DRI Trends 25 Yr RO894 Forecast

* These are draft numbers adjusted from Delphi VIII's Price Deflator Series.